

St. Mary River Bridge and Siphon
Spanning the St. Mary River
Babb Vicinity
Glacier County
Montana

HAER No. MT-22

HAER
MONT,
18-BABB.V.,
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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, D.C. 20240

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St. Mary River Bridge & Siphon

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Location: Spanning the St. Mary River six miles NNE of Babb, Glacier County, Montana.

Date of Construction: 1915

Present Owner: Glacier County
Glacier County Courthouse
Cut Bank, Montana 59427

Present Use: Vehicular Bridge/Aquaduct

Significance: The Reclamation Act of 1902 authorized the U.S. Reclamation Service of the Department of the Interior to undertake numerous irrigation projects to make arid land farmable. One of those projects in Montana was the Milk River Project intended to irrigate an estimated 250,000 acres. Most of the lands to be irrigated were along the Milk River from the point at which it re-enters the United States from Canada (NW of Havre) to the mouth of the Milk below Glasgow. A significant aspect of the Milk River Project was that headwater supply and storage was not solely the headwaters of the Milk, but in addition, including the headwaters of the St. Mary River. The St. Mary River flows into Hudson's Bay. The Milk River, after rising in the U.S., flows into Canada before returning to the U.S. to flow into the Missouri River. After investigations and negotiations covering ten years, a treaty was signed with the Canadian government allowing a portion of the St. Mary to be diverted into the Milk from where it would flow into Canada and be available for irrigation before returning to the U.S. The St. Mary River is principally fed by the great snow pack of Glacier Park, so dams were built at the lower ends of the St. Mary Lakes and Sherburne Lakes, and Swiftcurrent Creek was diverted to flow into lower St. Mary Lake rather than downstream. A canal, with its head one mile below the St. Mary Reservoir, was built to carry water 28.8 miles to the North Fork of the Milk River. The canal first travels along the west side of the St. Mary River for about eight miles before being carried over the St. Mary in a pair of 7-1/2-foot

diameter steel pressure pipes, each 3300 feet long. The pipes operate under a pressure head of 160 feet--sufficient to carry water over the Divide to the east of the St. Mary and into the Milk River drainage. This pin-connected Pratt through truss bridge, built by the Minneapolis Bridge Company in 1915, carries the above-described double barrel siphon system across the St. Mary. The bridge comprises two spans, each 96 feet long, and three lines of Pratt trusses. A roadway passes between the upstream and the middle truss while the two pipes are carried between the middle and downstream trusses. The superstructure of these trusses, which are supported on concrete abutments and a concrete pier, are composed as follows: lower chords are eyebars; the hip verticals are four laced angle sections and the other verticals are two laced channel sections (note that the verticals of the downstream truss are rotated 90 degrees from those of the other two); diagonals are eyebars and turnbuckles; the upper chord is a continuous steel plate riveted atop two channel sections with lacing bars riveted to their lower flanges. Under the plank deck of the roadway, wood stringers sit on the top flange of I-beam floor beams which are riveted to the superstructure. The pressure pipes are supported by brackets composed of steel plates cut out in the profile of the pipes with angle sections riveted along their lower edges and cut-out edges. These brackets are riveted atop composite I-beam floor beams which are riveted to the superstructure. The pipes are supported by concrete piers as they run along the valley bottom approaching the bridge and are set into the earth as they ascend the valley slopes. The pipes, although spurting water at a few riveted joints, still carry water.

Transmitted by:

Kevin Murphy, Historian HAER, 1984; from data compiled by Fredric L. Quivik, 1979

ADDENDUM TO
SAINT MARY RIVER BRIDGE AND SIPHON
Spanning Saint Mary River
Babb Vicinity
Glacier County
Montana

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